Superfund Program
Proposed Plan

Ruston Foundry Site
Alexandria, Louisiana

Region 6
March 30, 2002

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the Preferred Alternative for cleaning up the contaminated soil at the Ruston Foundry Superfund Site and provides the rationale for this preference. In addition, this Plan includes summaries of other cleanup alternatives evaluated for use at this site. This document is issued by the U.S. Environmental Protection Agency (EPA), the lead agency for site activities, and the Louisiana Department of Environmental Quality (LDEQ), the support agency. The EPA, in consultation with the LDEQ, will select a final remedy for the site after reviewing and considering all information submitted during the 30-day public comment period. The EPA, in consultation with the LDEQ, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

The EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 117(a) of the Comprehensive, Environmental, Response, Compensation, and Liability Act (CERCLA) § 9617(a). This Proposed Plan summarizes information that can be found in greater detail in the remedial investigation/feasibility study (RI/FS) report and other documents contained in the Administrative Record file for this site. The EPA and the State encourage the public to review these documents to gain a more comprehensive understanding of the site and Superfund activities that have been conducted at the site.

Dates to remember:
MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:
April 1 - April 30, 2002
The U.S. EPA will accept written comments on the Proposed Plan during the public comment period.

PUBLIC MEETING:
April 18, 2002
U.S. EPA will hold a public meeting to explain the Proposed Plan and all of the alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held at Alexandria City Hall Council Chambers, 915 3rd Street from 7:00 - 9:00 p.m.

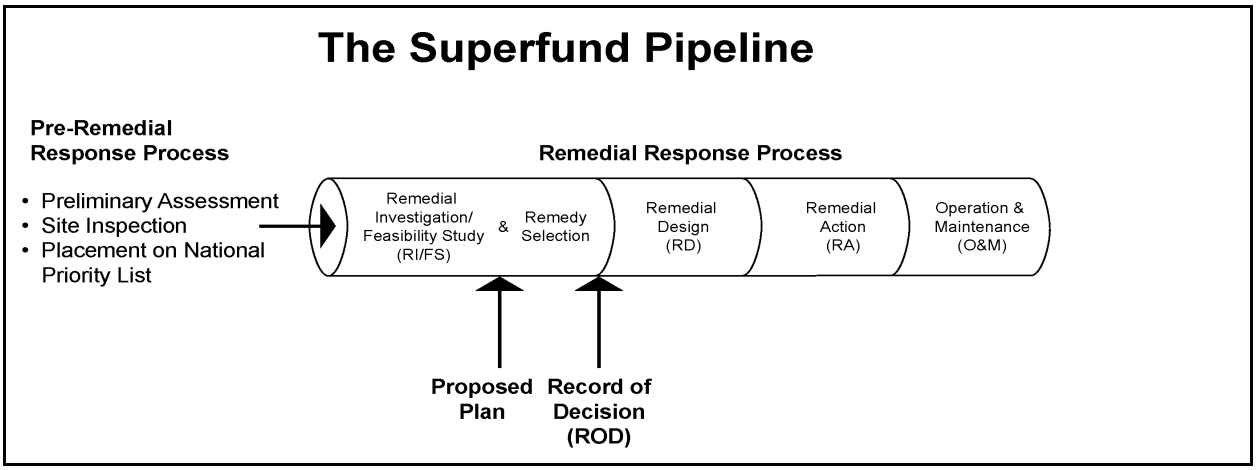
For more information, see the Administrative Record at the following locations:

Rapides Parish
Public Library
411 Washington Street
Alexandria, LA 71301
(318) 442-1840
Hours:
Mon-Thur 9 a.m. to 8 p.m.
Fri-Sat 9 a.m. to 6 p.m.
Sun 1 p.m. to 5 p.m.

U.S. EPA Records Center
Region 6
12th Floor Library
1445 Ross Avenue
Dallas, TX 75202
(214)-665-6427
Hours: Mon-Fri,
7:30 a.m. to 4:30 p.m.

SITE BACKGROUND

The Ruston Foundry site is an abandoned metal foundry that operated from 1908 until 1985 and is located on the



southeast side of Alexandria, Rapides Parish, Louisiana (see Figure 1-1). The Ruston Foundry property is 4.98 acres and the Louisiana Pine Products (LPP) property is 1.62 acres for a total site acreage of 6.6 acres (see Figure 1-2). The LPP property is part of the site due to Ruston conducting historical operations on that property. The Ruston Foundry property consists primarily of dilapidated structures and building foundations overgrown with thick brush, and the LPP property is a flat grassy area. The site is bordered by a series of abandoned railroad tracks to the west. Chatlin Lake Canal borders the Ruston property to the northeast and east, and Mill Street Ditch borders the Ruston property to the south-southeast and LPP to the north. Residential property is located to the north and east of the Ruston Foundry property across the canal and to the east and south of LPP. Historical and active industrialized areas lie further west and north of the site.

The LDEQ Inactive and Abandoned Sites Division conducted a site investigation in June 1990, which included drum and surface soil sampling. Based on these sample results, the LDEQ referred the site to the EPA as a candidate for an emergency response action.

Following LDEQ's referral of the site to the EPA, the EPA conducted a series of phased investigations followed by a removal action at the site. Investigations include the 1990 Site Assessment (E&E, 1991), the 1994 Site Assessment (E&E, 1994), the Expanded Site Inspection (E&E, 1998), the Removal Assessment (E&E, 1999a), and the Time-Critical Removal Action report (E&E, 1999b).

Foundry operations resulted in metals contaminated waste which was dispersed throughout the property. As a result of disposal activities, slag piles, foundry sand piles, and contaminated soils cover most of the site. Contaminants are found in the canal sediments and surface water due to runoff of site materials. Source materials in the form of drums of sludge were removed from the site during the time-critical removal action.

The site was placed on the Superfund National Priorities List (NPL) on May 10, 1999. Based on the investigation of site historical information, three potentially responsible parties were identified. Information request letters and general notice letters were issued requesting

specific site information and notifying the parties of potential liability for site response activity. Based on the responses to these letters, the agency issued special notice waivers because the Agency determined that negotiations would not move the project forward in a timely manner. Based on this decision, the site RI/FS was completed as an EPA fund-lead project.

Throughout the RI/FS process, the community has been updated on site activity through numerous fact sheets, door-to-door meetings, and open houses. The city of Alexandria was awarded a Reuse Grant from the Government for the purpose of developing a future reuse plan for the Ruston Foundry Site. The community has participated in a series of meetings held by the City to discuss the reuse plans for the property. The Louisiana Office of Public Health (LOPH) has also performed health consultation and health fair activities.

SITE CHARACTERISTICS

The Ruston Foundry site is located in an urban area with mixed development within the city limits of Alexandria. The site is not currently operational, and there are no onsite workers. Residential neighborhoods are located to the north, east, and south of the site. Chatlin Lake Canal and Mill Street Ditch are adjacent to the site and are used primarily for drainage. Recreational use of the canals, in the form of fishing, has been documented for these water bodies. No fishing restrictions or advisories are in affect, and access to the canal by local residents is unrestricted.

There is a recreational park located approximately 1/4-mile southeast of the site. Schools identified within one mile of the site include Peabody Elementary, Peabody Magnet, Jones Street Junior High, Bolton High, South Alexandria Sixth Grade School, and Alma Redwine Primary School.

Surface material (0-1 foot (ft)) at the Ruston Foundry site consists of foundry waste material (mainly in the main building areas), fat clay, and silt. The foundry waste is black in color and may include glass shards and chunks of porous (pumice-type) material. Oxidized pieces of coal are present near the onsite railroad spurs and the foundry building. Slag piles are blocky in appearance, generally have a lustrous surface, and are very large in size at some site locations. Along Mill Street Ditch and under the concrete slab, large quantities of oxidized metal filings are present. At several areas on the site, fire brick has been identified that generally contains metallized surfaces (shiny metallic luster coating the fire bricks).

Beneath the foundry waste material generally lies a fat clay with a few lenses of lean clay and silty clay. Three silty clay layers were identified. Only the third silty clay layer (20-25 feet deep) produced adequate supplies of water for sampling purposes.

From June 1999 through February 2002, the EPA conducted an RI/FS which included a pre-RI/FS investigation and the final RI/FS investigation. The RI/FS identified the types, quantities, and locations of contaminants and developed ways to address the contamination. The RI indicated that:

- Surface soils (0-1 ft) are contaminated with metals (i.e., lead and antimony), polyaromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs).

- Subsurface soils (>1 ft) are contaminated with metals and PAHs. Concentrations decrease with depth and appear to be limited to the central portion of the main facility.
- Metals were detected in sediment and trace amounts were detected in surface water. With the exception of mercury, the detections for both surface water and sediment are generally confined to immediately adjacent to the site.
- PAHs were detected in surface water samples from the canals upstream to the site and in sediments upstream, adjacent and downstream of the site.
- Although PCBs were detected in sediment upstream and adjacent to the site, PCBs were not detected in the surface water. Based on the sediment sampling, an upgradient offsite source may be contributing to the PCBs and PAHs detected in several sediment and surface water samples.
- Ground water samples collected from temporary wells had detections of metals and organics above the maximum contaminant level (MCL) and Louisiana Risk Evaluation/Corrective Action Program (RECAP) ground water classification standards. Only one of these was detected above the MCLs or RECAP ground water classification standards in the permanent monitor wells and is a common plasticizer found in the material used to construct wells. These data indicate that the detections in the temporary wells may have been elevated due to the greater turbidity of temporary well samples when compared to permanent well samples.
- Measured air concentrations of particulate matter (PM-10) metals, arsenic, beryllium, and chromium, exceeded the Region 6 risk-based screening ambient air concentrations for residential exposure.
- An underground storage tank (UST) was identified, and contains lube oil and fuel oil constituents.
- Asbestos Survey - A “transite” type siding/roofing material from dilapidated buildings tested positive for asbestos containing material (ACM).
- NORM Survey - The naturally occurring radioactive material (NORM) survey conducted by the LDEQ indicated that no significant readings above background were detected and that no radioactive material contamination was detected.

WHAT IS A "PRINCIPAL THREAT"?

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP Section 300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to ground water, surface water or air, or acts as a source for direct exposure. Contaminated ground water generally is not considered to be a source material; however, Non-Aqueous Phase Liquids (NAPLs) in ground water may be viewed as source material. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of the alternatives using the nine remedy selection criteria This analysis provides a basis for making a statutory finding that the remedy employs treatment as a principal element.

- Some foundry waste exceeded the t oxicity characteristic leaching procedure (TCLP) standard for lead and/or the Louisiana (LA) synthetic precipitation leachate procedure (SPLP) for protection of ground water for lead, beryllium and antimony.

The foundry slag and soil wastes left on the site as well as the ACM, UST liquid, and wastes exceeding lead TCLP are identified as principal threat wastes. The UST contents will be characterized during the remedial design to determine whether the contents will be cleaned up under CERCLA or OPA (Oil Pollution Act) authority. These principal threat wastes are either highly toxic, liquid, or hazardous source materials that would pose a significant risk to young children. Redevelopment of the site as a recreational environment would result in an unacceptable risk to children through direct exposure with site soils unless remediated.

SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

This action, referred to as the Ruston Foundry Remedial Action will be the final action for the site. Due to the previous removal of drums, the Remedial Action Objectives (RAOs) for the site are to prevent current and future exposure to contaminated foundry waste and prevent, to the extent possible, leaching of site contaminants into the ground water.

The EPA expects to use treatment to address the principal threats posed by a site, wherever practicable, and engineering controls for waste that poses a relatively low long-term threat or where treatment is impracticable. Through the use of treatment as a principal element, the response action will satisfy the preference for treatment and reduce the toxicity and mobility of the source materials that constitute the principal threat wastes at the

WHAT IS RISK AND HOW IS IT CALCULATED?

A Superfund human health risk assessment estimates the "baseline risk." This is an estimate of the likelihood of health problems occurring if no cleanup action were taken at a site. To estimate the baseline risk at a Superfund site, EPA undertakes a four-step process:

Step 1: Analyze Contamination
Step 2: Estimate Exposure
Step 3: Assess Potential Health Dangers
Step 4: Characterize Site Risk

In Step 1, EPA looks at the concentrations of contaminants found at a site as well as past scientific studies on the effects these contaminants have had on people (or animals, when human studies are unavailable). Comparisons between site-specific concentrations and concentrations reported in past studies help EPA to determine which contaminants are most likely to pose the greatest threat to human health.

In Step 2, EPA considers the different ways people might be exposed to the contaminants identified in Step 1, the concentrations people might be exposed to, and the potential frequency and duration of exposure. Using this information, EPA calculates a "reasonable maximum exposure" (RME) scenario, which portrays the highest level of human exposure that could reasonably be expected to occur.

In Step 3, EPA uses the information from Step 2 combined with information on the toxicity of each chemical to assess potential health risks. EPA considers two types of risk: cancer risk and non-cancer risk. The likelihood of any kind of cancer resulting from a Superfund site is generally expressed as an upper bound probability; for example, a "1 in 10,000 chance." In other words, for every 10,000 people that could be exposed, one extra cancer may occur as a result of exposure to site contaminants. An extra cancer case means that one more person could get cancer than would normally be expected to from all other causes. For non-cancer health effects, EPA calculates a "hazard index." The key concept here is that a "threshold level" (measured usually as a hazard index of less than 1) exists below which non-cancer health effects are no longer predicted.

In Step 4, EPA determines whether site risks are great enough to cause health problems for people at or near the Superfund site. The results of the three previous steps are combined, evaluated and summarized. EPA adds up the potential risks from the individual contaminants and exposure pathways and calculates a total site risk.

site.

SUMMARY OF SITE RISK

As part of the RI/FS, EPA conducted a baseline risk assessment (March 2001) to determine the current and future effects of contaminants on human health and the environment. According to the zoning board, the site is zoned for industrial usage. Although the site is currently industrial, site reuse plans indicate that there will be a combination of recreational/commercial activity across the site. Therefore, based on the reasonably anticipated future land use for the site as recreational, the cleanup will be more conservative. The two canals located adjacent to the site are designed for urban flood control and will be concrete lined as part of Alexandria's reuse plan.

The baseline risk assessment focused on health effects for the youth trespasser, child recreator, and adult recreator that could result from current and future exposure with contaminated soil, surface water, and sediment. The ecological baseline risk assessment also focused on effects resulting from exposure to site soils, sediment, and surface water. It is the lead agency's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Human Health Risks

The human health (HH) risk based preliminary remediation goals (PRGs) for chemicals of concern (COC) were calculated for site soils. These calculations were compared to the EPA carcinogenic range of acceptable risk defined as one in ten-thousand to one in one-million (1×10^{-4} to 1×10^{-6}), a non-carcinogenic risk defined as Hazard Quotient greater than one (HQ>1), and a cumulative non-carcinogenic risk defined as Hazard Index greater than one (HI>1).

Generally, exposure to chemicals in ground water may occur by ingestion, dermal contact, and inhalation of volatiles. Concentrations present in samples taken from the permanent ground water monitoring wells exceeded MCLs or RECAP screening criteria for one constituent which is a common plasticiser used in well construction material. The risk assessment did not identify contaminants of concern for the ground water because public water supply is currently provided to the site vicinity and will be provided onsite in the future. According to the water well inventory from the Louisiana Department of Transportation and Development (January 2001), there are no registered drinking water wells obtaining water from the Red River alluvial aquifer (<120 feet) within two miles of the site. The city of Alexandria is not planning to use the ground water in the area for its redevelopment project. Based on this, no complete exposure pathways were deemed to exist. Because no ground water exposure points were identified, the ground water exposure pathway is incomplete, and the screening levels were not exceeded, no unacceptable risk has been identified for ground water.

Although ground water exposure pathways are not complete at the Ruston Foundry Site, state regulations specify that soil concentrations of contaminants be protective of ground water. Site soils (0-1 ft) exceeded LA SPLP for beryllium, lead, and antimony. Beryllium is not a concern, however, because it was not detected in

surface soils above background. Therefore, PRGs for the protection of ground water are established for lead and antimony.

Air samples were taken for a period of four consecutive days. Measured air concentrations of PM-10 metals arsenic, beryllium, and chromium, exceeded the Region 6 risk-based screening ambient air concentrations for residential exposures. During the risk assessment, air concentrations were modeled based on the default particulate emissions factor and the calculated volatilization factor to calculate potential inhalation intakes from soil. Although these three metals exceeded the screening number, the concentrations were within the acceptable risk range. The modeling data are consistent with the sample data in that no unacceptable risk levels were identified for carcinogenic or non-carcinogenic effects. No remediation goals are recommended for air.

However, during remedial action, efforts will be made to control dust and run-off to limit the amount of materials that may migrate to a potential receptor. Workers will be required to wear the appropriate level of protection to avoid exposure during excavation and treatment activities. Air monitoring will be conducted during times of remediation to ensure that control measures are working to regulate site emissions.

The HH risk assessment evaluated contaminants of concern for surface water and sediment. The evaluation did not identify a carcinogenic or non-carcinogenic risk that exceeded the risk range for metal or organic constituents. Exposure through ingestion of fish is considered an incomplete pathway due to the short duration of fish contact with potentially impacted surface water or sediment. Also as part of the redevelopment activity, the canals will be concrete lined, thereby eliminating the exposure pathway.

WHAT ARE THE CONTAMINANTS OF CONCERN?

Lead: Site concentrations range from 10 mg/kg to 38,200 mg/kg. Lead is a naturally occurring metal. Its most important use is in the production of lead batteries, but is also used in ammunition, sheet lead, solder, brass pipes, and ceramic glazes. Most of the lead released to the environment was the result of car exhaust from the burning of leaded gasoline which has since been phased out. Lead-based paint is also a source of environmental lead. It has been phased out of production; however, many older homes remain covered with lead-based paint that may be weathering and chipping. Children are most sensitive and vulnerable to the effects of lead. Exposure to large quantities of lead can result in blood anemia, kidney damage, colic, muscle weakness, brain damage, slowed mental and physical growth, prematurely born babies, and slow mental development.

Antimony: Site concentrations range from .9 mg/kg to 14,300 mg/kg. Antimony is a silvery white metal that is easily broken and not used much by itself. It is usually mixed with other metals such as lead and zinc to form alloys. These alloys are used in lead storage batteries, solder, sheet and pipe metal, bearings, castings, ammunition, and pewter. It is not currently identified as a carcinogen. Long time exposure to antimony in the air can irritate your eyes, skin, and lungs. Long time inhalation of antimony can cause lung problems, heart problems, stomach pain, diarrhea, vomiting, and stomach ulcers.

Human risks were identified for surface soils. The greatest risk was found to exist for the child recreator. Non-carcinogenic risk was found to exist for antimony because exposure resulted in a HQ>1. Due to the cumulative effects of antimony on the circulatory system, the Hazard Index exceeded one. The Integrated Exposure Uptake Biokenetic Model (IEUBK) was used to determine the risk associated with lead. It was determined that exposure to site concentrations of lead would result in a greater than 5% estimated risk of exceeding 10 micrograms per deciliter (：g/dl) blood lead level. Iron was

listed as a contributor to the non-carcinogenic risk, however it is considered a nutrient rather than a risk contaminant. The resulting PRGs for site soil are 150 milligrams per killogram (mg/kg) for antimony and 500 mg/kg for lead.

Ecological Risks

A baseline ecological risk assessment indicated that the potential for significant ecological impacts related to site contaminants may occur. Risks related to surface soils exist for terrestrial plants, wildlife, and terrestrial invertebrates. Surface water concentrations may cause risk to fish, amphibians, and other aquatic life. Risks related to sediments may exist for the benthic invertebrate receptors.

The habitats located on Ruston Foundry Site currently exist due to the lack of activity onsite since the foundry was abandoned. The site will be made "ready for reuse", thereby altering the habitat in the future such that it will no longer support complete exposure pathways to ecological receptors. The city of Alexandria plans to convert the abandon site into a recreational/commercial reuse complex.

The canals will be redesigned and reconstructed in the future to better accommodate the drainage waters from the city and surrounding areas. Engineering plans developed by the city require that a concrete lining be placed along the bottom and sides of the canals. The placement of the concrete lining will interrupt the exposure pathway to the aquatic ecosystem.

Based on plans for future reuse and redevelopment of the entire site, habitat located onsite and along the canals will no longer exist; therefore, no longer sustaining the ecological wildlife currently present. Remedial goals will not be required for

Media of Interest	Remedial Action Objective
Surface Soil	RAO No. 1 - Prevent direct human contact (trespassers, adult recreators, and child recreators) with surface soils and waste piles containing lead at concentrations above 500 mg/kg. RAO No. 2 - Prevent direct human contact (trespassers, adult recreators, and child recreators) with surface soils and waste piles containing antimony at concentrations above 150 mg/kg. RAO No. 3 - Prevent leaching and migration of lead from surface soils and waste piles into the ground water at concentrations exceeding 0.015 mg/l. RAO No. 4 - Prevent leaching and migration of antimony from surface soils and waste piles into the ground water at concentrations exceeding 0.006 mg/l.
Other Media	RAO No. 5 - Prevent direct human contact with ACM at concentrations greater than 1% by weight. RAO No. 6 - Remove and dispose the UST, its contents, and surrounding contaminated soils in accordance with all applicable federal, state, and local regulations. RAO No. 7 - Handle slag pile material with TCLP lead concentrations greater than 5 mg/l as hazardous waste in accordance with all applicable federal, state, and local regulations. RAO No. 8 - Abandon the former onsite water supply well to prevent migration of contaminants from the surface soil to deeper soils and ground water and demolition and removal of the existing buildings, slabs, sumps, and trash.

ACM= asbestos containing material
UST = underground storage tank
TCLP = Toxicity Characteristic Leaching Procedure
mg/kg = milligrams per kilogram
mg/l = milligrams per liter
% = percent

ecological receptors.

REMEDIAL ACTION OBJECTIVES

This proposed action will reduce the excess noncancer risk associated with exposure to contaminated soil, the excess risk of exceeding 10 ：g/dl blood lead level, and the potential for migration of contaminants into the ground water. This will be achieved by reducing the concentrations of the soil contaminants to the following target levels:

Antimony SPLP	150 mg/kg and/or < LA
Lead	500 mg/kg and/or < LA SPLP

Because there are no Federal or State cleanup standards for soil contamination, the EPA established these targets, or PRGs, based on the baseline risk assessment. Targets were selected that would both reduce the risk associated with exposure to soil contaminants to an acceptable level, and ensure minimal migration, to the extent possible, of site contaminants into the ground water and surface water.

SUMMARY OF REMEDIAL ALTERNATIVES

Remedial alternatives for the Ruston Foundry Site were based on EPA's "Presumptive Remedies for Metals-in-Soil Sites" (September 1999). The alternatives, presented below, are numbered to correspond with the numbers in the RI/FS Report. The Preferred alternative is Remedial Alternative 4 (Stabilization and Offsite Disposal).

SUMMARY OF REMEDIAL ALTERNATIVES RUSTON FOUNDRY SITE

Medium	RI/FS Remedial Alternative Designation	Description
SOIL	1	No action
	2	Containment
	3	Stabilization and Capping
	4	Stabilization and Offsite Disposal
	5	Excavation and Offsite Disposal

Common elements:

The following paragraphs identify the common elements of all alternatives except for Remedial Alternative 1-No Action.

- For 0 to 1 ft, the areas to be remediated are those which exceed the onsite surface soil antimony PRG of 150 mg/kg, the lead PRG of 500 mg/kg, and/or the LA SPLP. This equates to a total of approximately 15,000 cubic yards (yd^3) of contaminated soil/sediment that will be addressed by each remedy option.
- The ACM will be consolidated on site, contained, and transported off-site to a disposal facility licensed to accept ACM. Methods to control airborne dispersion of asbestos will be implemented during remediation. The estimated total volume of material is 22 yd^3.
- The UST, its contents, and the surrounding petroleum wastes will be characterized during the remedial design to determine whether the contents will be cleaned up under CERCLA or OPA authority. The surrounding PCB contaminated soils will be removed and disposed offsite in accordance with all federal, state, and local regulations. Total volume of tank contents is estimated at 5,000 gallons. The associated soils are assumed to be included in the surface soil estimated volume.
- The dilapidated buildings and

foundations will be removed and disposed offsite. The estimated volume is 300 yd^3.

- The former on-site water supply well will be plugged and abandoned in accordance with all federal, state, and local regulations.
- An estimated volume of 1300 yd^3 of slag waste will be remediated. This slag exceeds TCLP lead standards and is considered hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) and is therefore subject to the RCRA land disposal restrictions (LDRs) if the waste is excavated and treated or removed from the area of contamination. All remedies involving such activities will comply with the LDR (63 FR 28555; May 26, 1998) and will meet 90% removal efficiency or ten times the universal treatment standard for that contaminant in the material prior to land disposal in a RCRA-compliant landfill.

NO ACTION ALTERNATIVE

Remedial Alternative 1: NO ACTION

Estimated Capital Cost: $0
Estimated Annual O&M Cost: $46,583
Estimated Present Worth Cost: $46,583
Estimated Construction Timeframe: None

Regulations governing the Superfund program generally require that the "no action" alternative be evaluated generally to establish a baseline for comparison. Under this alternative, the EPA would take no action at the site to prevent exposure to the soil or possible leaching of contaminants into the ground water.

By leaving the waste onsite, the EPA will be required to conduct remedy reviews at least every five years.

SOIL ALTERNATIVES

Remedial Alternative 2: CONTAINMENT

Estimated Capital Cost: $3,465,951
Estimated Annual O&M Cost: $731,577
Estimated Present Worth Cost: $4,197,528
Estimated Construction Timeframe: 9 to 12 months
Estimated Time to Achieve RAOs: 9 to 12 months

A containment cell will be designed and constructed onsite with sufficient volume to contain 15,000 yd^3 of lead and antimony contaminated surface soil and soil exceeding LA SPLP, 1,300 yd^3 of hazardous waste, and 300 yd^3 building debris. The cell will be constructed with impermeable bottoms and sides to prevent the infiltration of water into the cell and to prevent the migration of contaminants out of the cell. An impermeable cap will be constructed over the waste consisting of compacted clay and/or an impermeable membrane liner. A natural vegetative cover will be established and maintained over the cap. A leachate collection system and/or a vapor recovery system may also be necessary as part of the containment cell design. Institutional controls (i.e., land use restrictions, deed notices, etc.) will be required to aid in the management of the wastes left onsite. In addition, long term monitoring of the cell cap and the surface water in Mill Street Ditch and Chatlin Lake Canal as well as the ground water will be required to ensure that contaminants are not leaching from the containment cell and to verify the cap retains its integrity. The EPA will also be

required to conduct remedy reviews at least every five years.

This alternative will achieve all RAO and meet the PRGs. This alternative may be compatible with the expected future landuse and the Alexandria's site reuse project. Because the contaminants will be contained, this remedy does not meet the Agency's preference for treatment of principal threat wastes.

Alternative 3: STABILIZATION AND CAPPING

Estimated Capital Cost: $2,669,671
Estimated Annual O&M Cost: $731,578
Estimated Present Worth Cost: $3,401,249
Estimated Construction Timeframe: 9 to 12 months
Estimated Time to Achieve RAOs: 9 to 12 months

The waste material will be segregated into one stockpile for the hazardous waste, one pile for soil exceeding LA SPLP, and another stockpile for building debris. Lead and antimony contaminated surface soils which exceed the PRGs for human health may be left in place without being excavated.

The 1,300 yd^3 of hazardous waste and the 4,650 yd^3 of soil exceeding LA SPLP (out of the total 15,000 yd^3) will be stabilized. Stabilization involves mixing the material with a reagent (cement, flyash, etc.) to physically or chemically bind the metals to the waste material to prevent leaching. During design, a treatability study will determine the proper reagent and mixing ratio. The stabilized material, the building debris, and the remaining 10,350 yd^3 of lead and antimony contaminated surface soil that was left in place will be contained onsite by capping. The stabilized and building debris wastes will be compacted into a consolidation cell. The cell and remaining surface soils will be covered with clay and/or an impermeable membrane liner. Topsoil will be placed on the cap and a natural vegetative cover will be established and maintained over the cap.

Remedial Alternative 3 is similar to Remedial Alternative 2 except that some of the wastes will be stabilized prior to capping/containment. In addition, the containment cell for Remedial Alternative 3 may not need an impermeable bottom, leachate collection system, or vapor recover system because the wastes have been stabilized to prevent contaminant migration.

Institutional controls (i.e., land use restrictions, deed notices, etc.) will be required to aid in the management of the wastes left onsite. In addition, long term monitoring of the cell cap and the surface water in Mill Street Ditch and Chatlin Lake Canal as well as the ground water will be required to ensure that contaminants are not leaching from the containment cell and to verify the cap retains its integrity. The EPA will also be required to conduct remedy reviews at least every five years.

This alternative will achieve all RAO and meet the PRGs. This alternative may be compatible with the expected future landuse and the Alexandria's site reuse project. Because the hazardous waste will be stabilized, this portion meets the Agency's preference for treatment of principal threat wastes. However, the remaining lead and antimony contaminated soil will be contained, which does not meet the Agency's preference for treatment of principal threat wastes.

Alternative 4: STABILIZATION AND OFFSITE DISPOSAL

Estimated Capital Cost: $5,007,412
Estimated Annual O&M Cost: $0
Estimated Present Worth Cost: $5,007,412
Estimated Construction Timeframe: 9 to 12 months
Estimated Time to Achieve RAOs: 9 to 12 months

The 1,300 yd^3 of hazardous waste will be stabilized. The stabilized material, the 300 yd^3 of building debris, and the 15,000 yd^3 of lead and antimony contaminated surface soil and soil exceeding LA SPLP will be disposed offsite at a RCRA regulated Subtitle D facility. Offsite disposal activities will be conducted in accordance with RCRA LDR standards. The excavated areas will be backfilled with clean fill and compacted. Topsoil will be placed over the disturbed area and a natural vegetative cover will be established and maintained over the site.

Remedial Alternative 4 is similar to Remedial Alternative 3 except that soils exceeding LA SPLP do not need to be stabilized and the wastes are disposed offsite rather than being capped.

Institutional controls should not be required because none of the waste material will be left on site. In addition, long term monitoring of the surface water in Mill Street Ditch and Chatlin Lake Canal as well as the ground water should not be required. Because the waste material will be disposed offsite, five-year reviews of the remedy will not be required.

This alternative will achieve all RAO and meet the PRGs. This alternative is compatible with the expected future landuse and the Alexandria's site reuse project. Because the hazardous waste will be stabilized, this portion meets the Agency's preference for treatment of principal threat wastes. The remaining lead and antimony contaminated soil will be disposed of offsite; therefore, it does not meet the Agency's preference for treatment of principal threat wastes.

Alternative 5: EXCAVATION AND OFFSITE DISPOSAL

Estimated Capital Cost: $5,537,975
Estimated Annual O&M Cost: $0
Estimated Present Worth Cost: $5,537,975
Estimated Construction Timeframe: 9 to 12 months
Estimated Time to Achieve RAOs: 9 to 12 months

The 1,300 yd^3 of hazardous waste will be disposed offsite at a RCRA Subtitle C Facility. The 15,000 yd^3 of lead and antimony contaminated surface soil and soil exceeding LA SPLP and the 300 yd^3 of building debris will be disposed offsite at a RCRA regulated Subtitle D facility. All offsite disposal activities will be conducted in accordance with RCRA LDR standards. The excavated areas will be backfilled with clean fill and compacted. Topsoil will be placed over the disturbed area and a natural

EVALUATION CRITERIA FOR SUPERFUND REMEDIAL ALTERNATIVES
Overall Protectiveness of Human Health and the Environment determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.
Compliance with ARARs evaluates whether the alternative meets Federal and State environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.
Long-term Effectiveness and Permanence considers the ability of an alternative to maintain protection of human health and the environment over time.
Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.
Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.
Cost includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.
State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.
Community Acceptance considers whether the local community agrees with EPA's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

vegetative cover will be established and maintained over the site.

Remedial Alternative 5 is similar to Remedial Alternative 4 except that the hazardous waste foundry material is not stabilized prior to disposal and it is disposed of at a RCRA regulated Subtitle C rather than a RCRA regulated Subtitle D facility.

Institutional controls should not be required because none of the waste material will be left on site. In addition, long term monitoring of the surface water in Mill Street Ditch and Chatlin Lake Canal as well as the ground water should not be required. Because the waste material will be disposed offsite, five-year reviews of the remedy will not be required.

This alternative will achieve all RAO and meet the PRGs. This alternative is compatible with the expected future landuse and the Alexandria's site reuse project. Because the contaminants will be removed and disposed of offsite, this remedy does not meet the Agency's preference for treatment of principal threat wastes.

EVALUATION OF ALTERNATIVES

Nine criteria are used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. This section of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine evaluation criteria are discussed below. The "Detailed Analysis of Alternatives" can be found in the FS.

1. Overall Protection of Human Health and the Environment

All of the alternatives except the "no action" alternative would provide adequate protection of human health and the environment by eliminating, reducing, or controlling risk through treatment, containment, engineering controls, and/or institutional controls.

Because the "no action" alternative is not protective of human health and the

environment, it was eliminated from consideration under the remaining eight criteria.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

All soil alternatives would meet their respective ARARs from Federal and State laws. Alternatives 4 and 5 would require testing of the soils to ensure that residuals meet LDR standards prior to disposal. Alternatives 2 and 3 are not required to meet LDR standards or minimum technology requirements because contamination would be consolidated onsite (preamble to the NCP, 55 FR 8758-8760, March 8, 1990).

3. Long-term Effectiveness and Permanence

Alternative 4 and Alternative 5 would reduce the inherent hazards posed by the contaminants at the site to health-based levels and further controls would not be necessary to ensure long-term effectiveness and permanence. Alternative 2 and Alternative 3 would prevent the direct contact exposure and contaminant migration, however, monitoring would be necessary to ensure the long-term effectiveness and permanence of these alternatives.

4. Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment

Alternative 2, Alternative 3, and Alternative 4 provide reduction of the mobility of the contaminants through either the use of a physical barrier to prevent contact of the contaminants with the environment or through the use of stabilization. For Alternative 2, the toxicity and volume of the contaminants are not reduced. For Alternatives 3 and 4, the toxicity of the contaminants is not reduced and some increase in the volume of contaminated material may occur during the stabilization process due to the addition of stabilization reagents. Alternative 5 provides no real reduction of the toxicity, mobility, or volume of contaminants; however, the volume of contaminated material onsite will be transferred to an offsite disposal facility. Although reduction of mobility is not accomplished by the remedial action, the Subtitle C disposal facility, according to RCRA, will treat the waste prior to disposal in order to meet LDRs.

5. Short-term Effectiveness

Alternatives 2 through 5 involve excavation of contaminated soils and thus present a potential for short-term exposure. All alternatives pose potential risks to construction workers and nearby residents during excavation and handling of contaminated material primarily associated with equipment movement and exposure to contaminated dust. Control of dust and run-off will limit the amount of materials that may migrate to a potential receptor, and workers would be required to wear the appropriate level of protection to avoid exposure during excavation and treatment activities.

Alternatives 3 and 4 may also pose additional short term risks to the nearby residents and onsite workers due to the increased handling required for application of the reagent and potential emissions from the onsite stabilization. Alternatives 4 and 5 may present a higher short-term risk to the nearby residents because of the potential for exposure to the contaminated soils by trucking the material to an offsite facility.

6. Implementability

For all Alternatives, administrative coordination, labor, equipment, materials, and outside services will be required. These alternatives utilize conventional material and equipment which are widely used and accepted in the construction industry.

Difficulties may be encountered for Alternatives 2 and 3 during construction of the onsite disposal cell depending on the conditions of the subsurface soil.

7. Cost

The estimated present worth cost for Alternative 3 is less than Alternative 2. Alternative 2 is less than Alternative 4, and Alternative 5 is the most costly.

8. State/Support Agency Acceptance

The State of Louisiana supports the Preferred Alternative.

9. Community Acceptance

Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the responsiveness summary of the site ROD.

SUMMARY OF THE PREFERRED ALTERNATIVE - Number 4

The Preferred Alternative for cleaning up the Ruston Foundry Site is Remedial Alternative 4 (Stabilization and Offsite Disposal). During design, a treatability study will determine the proper reagent and mixing ratio to be used for stabilization. Alternative 4 meets the RAOs and is selected over other alternatives because it is easily implemented, expected to achieve substantial and long-term risk reduction through treatment and offsite disposal, and is expected to allow the property to be used for the reasonably anticipated future land use, which is recreational/commercial. Because the waste material will be disposed offsite, operations and maintenance activity and five-year reviews of the remedy will not be required. Hence Alternative 4, hereafter referred to as the Preferred Alternative, reduces the risk within a reasonable time frame and at less cost than Alternative 5.

Based on the information available at this time, the EPA and the State of Louisiana believe the Preferred Alternative would be protective of human health and the environment, would comply with ARARs, and would utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. Because it would treat the hazardous source materials constituting principal threats, a portion of the remedy will meet the statutory preference for the selection of a remedy that involves treatment as a principal element. Treatment of the lead and antimony contaminated soil would not be cost effective since the soils are not identified as hazardous wastes and can be disposed of in a RCRA Subtitle D facility. The Preferred Alternative can change in response to public comment or new information.

COMMUNITY PARTICIPATION

For further information on the Ruston Foundry Site, please contact:

Katrina Coltrain,	Janetta Coats,	Nora Lane
EPA Remedial	EPA Community	LDEQ
Project Manager	Relations	Project Manager
(214) 665-8143	Coordinator	(225) 765-0487
	(214) 665-7308	

U.S. EPA- Region 6
1445 Ross Avenue
Dallas, TX 75202-2733
Toll free phone number 1-800-533-3508

The EPA and the LDEQ provide information regarding the cleanup of the Ruston Foundry Site to the public through public meetings, the Administrative Record file for the site, and announcements published in the Alexandria, Louisiana Newspaper. The EPA and the State encourage the public to gain a more comprehensive understanding of the site and the Superfund activities that have been conducted at the site.

The date, location, and time of the public meeting, dates for the public comment period, and the locations of the Administrative Record file, are provided on the front page of this Proposed Plan.

Glossary of Terms

Specialized terms used in this Proposed Plan are defined below:

Applicable or relevant and appropriate requirements (ARARs) - the Federal and State environmental laws that a selected remedy will meet. These requirements may vary among sites and alternatives.

Ground water - underground water that fills pores in soils or openings in rocks to the point of saturation. Ground water is often used as a source of drinking water via municipal or domestic wells.

LDR - Land Disposal Restriction. The land disposal restrictions program requires certain wastes to be treated before they may be disposed of in the land.

Monitoring - ongoing collection of information about the environment that helps gauge the effectiveness of a clean-up action. Monitoring wells would be used to detect any leaks from containment structures.

Present Worth Analysis - a method of evaluation of expenditures that occur over different time periods. By discounting all costs to a common base year, the costs for different remedial action alternatives can be compared on the basis of a single figure for each alternative. When calculating present worth cost for Superfund sites, total operations & maintenance costs are to be included.

Resource Conservation and Recovery Act (RCRA) - the Federal act that established a regulatory system to track hazardous wastes from the time they are generated to their final disposal. RCRA also provides for safe hazardous waste management practices and imposes standards for transporting, treating, storing, and disposing of hazardous waste.

Revegetate - to replace topsoil, seed, and mulch on prepared soil to prevent wind and water erosion.

Safe Drinking Water Act Maximum Contaminant Level (SDWA MCL) - the maximum permissible level of a contaminant in water that is delivered to any user of a public water system.

Cap-layer of clay, or other impermeable material, installed over the top of a closed landfill to prevent entry of rainwater and minimize leachate.

Stabilization - the process by which wastes are rendered relatively inert, uniform, biologically inactive, nuisance-free, or harmless.

Surface soil - for this project, soil between zero and one foot in depth.

Subsurface soil - for this project, soils below one foot in depth.

Hazard quotient - ratio of exposure to toxicity: an exposure level over a specified time period with a reference dose derived for a similar exposure period.

Hazard index - sum of more than one hazard quotient for multiple substances and/or multiple exposure pathways.

TCLP - Toxicity Characteristic Leaching Procedure: intended to determine the mobility or leaching potential in a landfill of hazardous organic and inorganic contaminants in liquid or solid wastes.

SPLP - Synthetic Precipitation Leachate Procedure: used to determine potential leaching or mobility of organic and inorganic analytes present in liquids, soils, and wastes. The test can be specific for volatiles, semi-volatiles, metals, or pesticides and herbicides. The SPLP test result may be used to determine if a constituent's concentration in soil is protective of groundwater.

NPL - National Priorities List: EPA's list of sites with releases or potential releases of hazardous substances that require further investigation.

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for the Ruston Foundry Superfund Site is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup remedy for the site.

You may use the space below to write your comments, then fold and mail. Comments must be postmarked by April 30, 2002. If you have any questions about the comment period, please contact Katrina Coltrain (214) 665-8143 or through EPA's toll-free number at 1-800-533-3508. Those with electronic communications capabilities may submit their comments to EPA via Internet at the following e-mail address: coltrain.katrina@epa.gov.

Name_____

Address_____

City_____

State_____ Zip_____

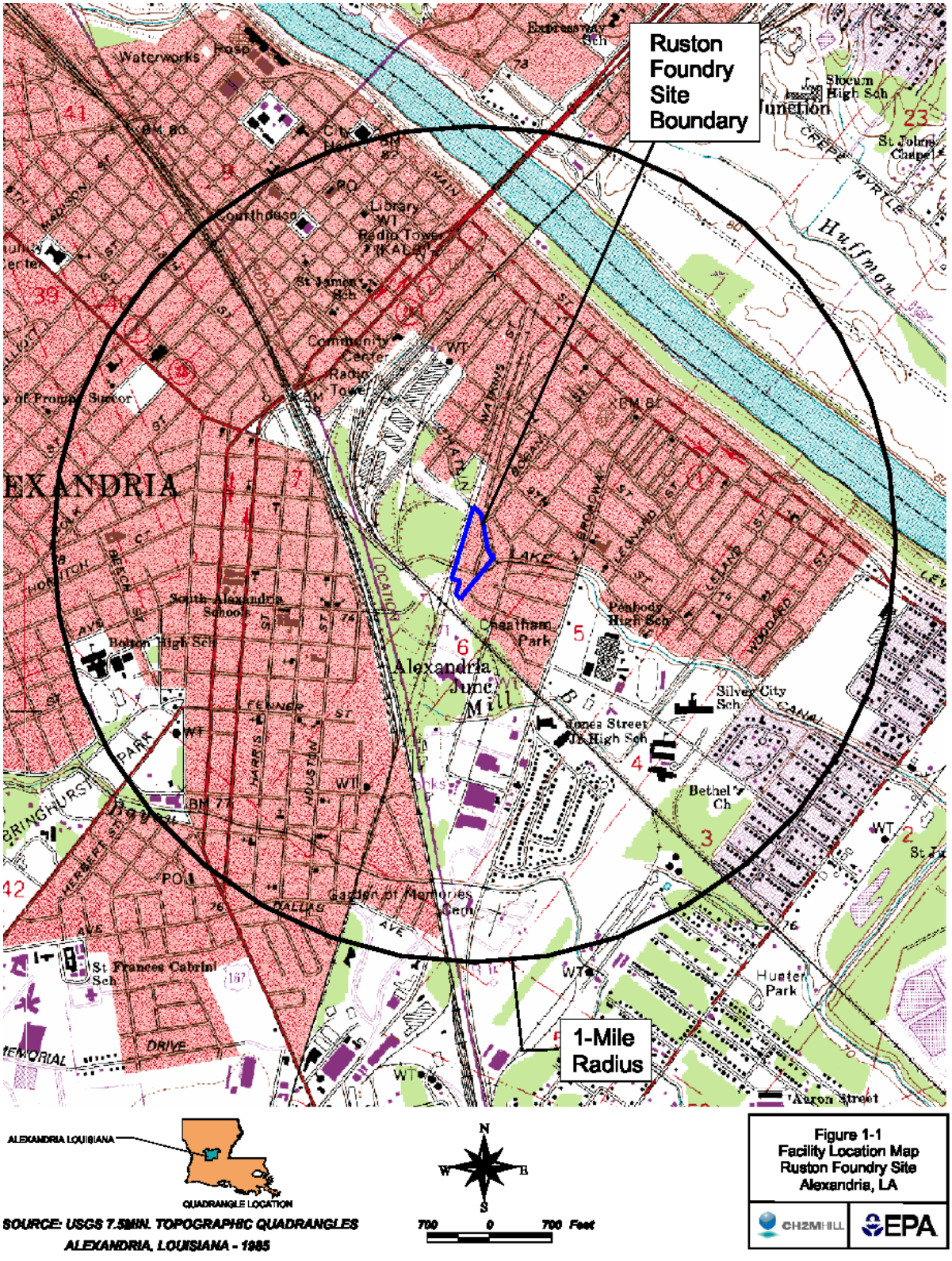


Figure 1-1: Site location map.

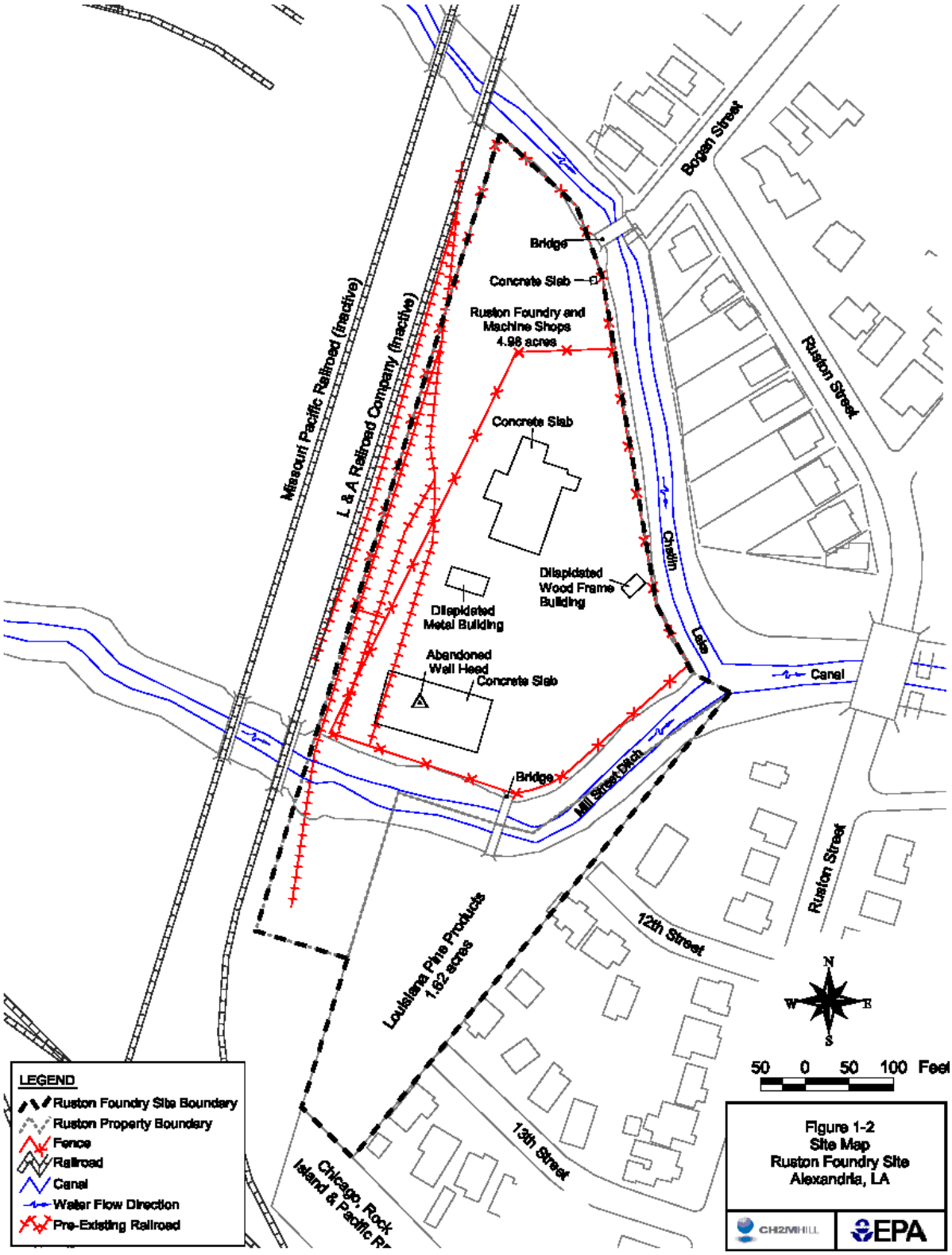


Figure 1-2: Site map.